

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A radiation detector for detecting radiation according to a defined spectral sensitivity distribution[[(14)]] having a sensitivity maximum at a defined wavelength λ_0 , said radiation detector comprising at least one semiconductor chip[[(1)]] and at least one optical filter disposed after said semiconductor chip[[(1)]], ~~characterized in that~~

wherein

said semiconductor chip contains at least one III-V semiconductor material;

said optical filter absorbs radiation of a wavelength that is greater than the wavelength λ_0 of the sensitivity maximum.

2. (Currently Amended) The radiation detector as in claim 1, ~~characterized in that~~
wherein said defined spectral sensitivity distribution[[(14)]] is that of the human eye.

3. (Currently Amended) A radiation detector comprising at least one semiconductor chip [[(1)]] and operative to detect radiation according to the spectral sensitivity distribution[[(14)]] of the human eye, ~~characterized in that~~ wherein said semiconductor chip[[(1)]] contains at least one III-V semiconductor material.

4. (Currently Amended) The radiation detector as in claim 3, ~~characterized in that~~
wherein said radiation detector comprises at least one optical filter disposed after said semiconductor chip[[(1)]], and said optical filter absorbs radiation of a wavelength that is greater than the wavelength λ_0' of the sensitivity maximum of the human eye.

5. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~
claim 1, ~~characterized in that~~ wherein said semiconductor chip is an LED chip.

6. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein the sensitivity of said semiconductor chip[[(1)]] exhibits at least one maximum[[(13)]] at a wavelength λ_1 , said wavelength differing by no more than 50 nm, preferably no more than 15 nm, from the wavelength λ_0 or the wavelength λ_0' .

7. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein said detector comprises an encapsulation[[(4)]] that at least partially surrounds said semiconductor chip[[(1)]].

8. (Currently Amended) The radiation detector as in claim 7, ~~characterized in that~~ wherein said encapsulation[[(4)]] contains a resin, preferably a reaction resin.

9. (Currently Amended) The radiation detector as in claim 7[[or 8]], ~~characterized in that~~ wherein said optical filter is disposed at least partially inside, outside and/or on said encapsulation[[(4)]] and/or the encapsulant itself constitutes the filter.

10. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein said optical filter contains a plurality of filter particles [[(5)]].

11. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~ claim 1, ~~characterized in that~~ wherein said semiconductor chip[(1)] comprises a filter layer [[(3)]].

12. (Currently Amended) The radiation detector as in claim 11, ~~characterized in that~~ wherein said filter layer[[(3)]] absorbs wavelengths that are smaller than λ_0 or λ_0' .

13. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~

claim 1, characterized in that wherein said radiation detector has a detector sensitivity[[(12)]] such that at an arbitrary wavelength, the difference between the corresponding values of said detector sensitivity[[(12)]] and said defined sensitivity[[(14)]] is less than 40%, preferably less than 25%.

14. (Currently Amended) The radiation detector as in ~~one of the preceding claims~~ claim 1, characterized in that wherein said III-V semiconductor material is $\text{In}_x\text{Ga}_y\text{Al}_{1-x-y}\text{P}$, $\text{In}_x\text{Ga}_y\text{Al}_{1-x-y}\text{N}$ or $\text{In}_x\text{Ga}_y\text{Al}_{1-x-y}\text{As}$, with in each case $0 \leq x \leq 1$, $0 \leq y \leq 1$ and $x + y \leq 1$.

15. (Currently Amended) The radiation detector as in ~~one of claims 5 to 14~~ claim 5, characterized in that wherein the emission wavelength of said LED chip[[(1)]] is in the red region of the spectrum.

16. (Currently Amended) ~~The use of a~~ A method comprising using the radiation detector as in ~~one of the preceding claims~~ according to claim 1 as an environmental light sensor.

17. (Currently Amended) ~~The use of a radiation detector as in one of the preceding claims for~~ A method comprising controlling the exertion of an influence on devices whose manner of operation, period of operation, perception and/or use is related to the defined spectral sensitivity distribution by using the radiation detector according to claim 1.

18. (Currently Amended) ~~The use of a radiation detector as in one of the preceding claims for~~ A method comprising controlling the brightness of lighting devices by using the radiation detector according to claim 1.

19. (Currently Amended) ~~The use of a radiation detector as in one of the preceding claims for~~ A method comprising controlling the brightness of the backlighting of LCD screens by using the radiation detector according to claim 1.

Applicant : Heinz Haas et al.
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20. (Currently Amended) ~~The use of a radiation detector as in one of the preceding~~
~~claims for~~ A method comprising controlling the brightness of indicators by using the radiation
detector according to claim 1.

21. (Currently Amended) ~~The use of a radiation detector as in one of the preceding~~
~~claims for~~ A method comprising controlling the turn-on or turn-off instants of lighting devices by
using the radiation detector according to claim 1.